

Serial No.: 10/705,494
Docket No.: 23040-03B

Examiner: J. Hong
Art Unit: 3726

CLAIM AMENDMENTS

Claim 1. (Currently amended) Process for continuously producing, ~~inspecting~~ and packing finished drawn metal parts in containers identifiable ~~identified~~ by ~~a~~ the tool from which the drawn metal parts ~~they~~ were produced, comprising the steps of:

providing a plurality of identifiable ~~identified~~ drawing press tools;

supplying each one of the plurality of identifiable ~~identified~~ drawing press tools with a supply of metal blanks;

drawing the metal blanks in the plurality of identifiable ~~identified~~ drawing press tools and providing to provide a plurality of segregated streams of drawn metal parts, each stream being associated with one of said plurality of identifiable ~~identified~~ drawing press tools;

merging the segregated streams into a single ordered stream of drawn metal parts having a repeating sequential order enabling identification of the drawing press tool in which the drawn metal part was drawn;

~~removing a drawn metal part from the ordered stream;~~

~~inspecting the removed part to see if it is defective;~~

providing a plurality of containers each of which corresponds ~~corresponding to one of~~ said plurality of identifiable ~~identified~~ drawing press tools; and

packing the finished drawn metal parts from the ordered stream into the containers respectively corresponding to the each of the identifiable ~~identified~~ drawing press tools.

Claim 2. (Currently amended) The process according to claim 9 + including the step of ceasing operation of ~~a selected the~~ the identified drawing press tool that produced said removed part if the part is determined to be defective, while continuing to operate the remaining ~~remainder of the non-selected ones of the plurality of~~ identified drawing press tools.

Claim 3. (Currently amended) The process according to claim 9 +, including the step of removing the drawn metal parts produced by a selected drawing press tool by ejecting the

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drawn metal parts from the ordered stream that have the same number in said repeating sequential order, while maintaining the gaps in the ordered stream corresponding to the previous locations of the ejected drawn metal parts.

Claim 4. (Original) The process according to claim 1, wherein said merging step comprises providing a plurality of feed wheels arranged to receive the parts from respective ones of said segregated streams, providing a merge wheel coupled to said feed wheels and arranged to receive drawn metal parts from each of the feed wheels in turn, said merge wheel being arranged to discharge drawn metal parts in an ordered stream having said repeating sequential order.

Claim 5. (Currently amended) Process for continuously producing, ~~inspecting~~ and packing finished drawn metal parts in containers identified by a ~~the~~ tool from which the drawn metal parts ~~they~~ were produced, comprising the steps of:

providing a source of initially drawn metal cups;

providing a plurality of identifiable ~~identified~~ drawing press tools;

supplying each one of the plurality of identifiable ~~identified~~ drawing press tools with a supply of metal cups from said source;

drawing the metal cups in the plurality of identifiable ~~identified~~ drawing press tools and providing to provide a plurality of segregated streams of drawn metal parts, each said stream being associated with one of said identifiable ~~identified~~ drawing press tools;

merging said segregated streams into a single ordered stream of drawn metal parts having a repeating sequential order, said repeating sequential order enabling identification of the drawing press tool in which the drawn metal part was drawn by the location of the metal part in said ordered stream;

providing a conveyor having a segregated pockets ~~pocket~~ for each of said drawn metal parts;

inserting the drawn metal parts into the segregated ~~conveyor~~ pockets in said repeating sequential order;

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~~removing a drawn metal part from one of said conveyor pockets in the ordered stream;~~

~~automatically inspecting said removed part to see if it is defective;~~

~~identifying the drawing press tool by identifying the pocket on said conveyor from which the drawn metal part was removed;~~

performing additional manufacturing steps on the ordered stream to provide finished drawn metal parts, ~~while maintaining empty pockets on the conveyor corresponding to the locations where drawn metal parts are removed;~~

providing a plurality of containers each of which corresponds to one of ~~corresponding to~~ said plurality of identifiable ~~identified~~ drawing press tools; and

packing the finished drawn metal parts from the ordered stream into said containers respectively corresponding to said identifiable ~~identified~~ drawing press tools.

Claim 6. (Currently amended) The process according to claim 10 ~~5~~ including the step of ceasing operation of a selected identified drawing press tool that produced said removed part ~~if the part is defective~~, while continuing to operate the remaining ~~remainder of the~~ ~~non-selected ones of the~~ plurality of identified drawing press tools.

Claim 7. (Currently amended) The process according to claim 10 ~~5~~, including the step of removing the drawn metal parts produced by a selected drawing press tool by ejecting the drawn metal parts from the ordered stream that have the same number in said repeating sequential order, while maintaining the empty pockets on the conveyor corresponding to the previous locations of the ejected drawn metal parts.

Claim 8. (Original) The process according to claim 5, wherein said merging step comprises providing a plurality of feed wheels arranged to receive the parts from respective ones of said segregated streams, providing a merge wheel coupled to said feed wheels and arranged to receive drawn metal parts from each of the feed wheels in turn, said merge wheel being arranged to discharge drawn metal parts in an ordered stream having said repeating sequential order.

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Claim 9. (New) The process according to claim 1, comprising the steps of:
removing one drawn metal part from the merged single ordered stream of drawn metal parts; and
determining if the removed part is defective.

Claim 10. (New) The process according to claim 1, comprising the step of inspecting at least one drawn metal part for defects.

Claim 11. (New) The process according to claim 10, wherein the step of inspecting the drawn metal part for defects comprises removing the at least one drawn metal part from the single ordered stream of drawn metal parts.

Claim 12. (New) The process according to claim 5, comprising the steps of:
removing one drawn metal part from one of said conveyor pockets in the ordered stream;
determining if the removed part is defective; and
if the part is defective, identifying the drawing press tool that produced the defective drawn metal part by identifying the pocket from which the drawn metal part was removed.

Claim 13. (New) The process according to claim 12, comprising the step of:
purging the conveyor of all of the drawn metal parts produced by the identified drawing press tool that produced the defective drawn metal part;
wherein empty pockets on the conveyor corresponding to the locations where drawn metal parts are removed are maintained during the remaining steps of the process.

Claim 14. (New) The process according to claim 5, comprising the steps of:
inspecting at least one metal part in one of the conveyor pockets for defects; and

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if the part is defective, identifying the drawing press tool that produced the defective drawn metal part by identifying the pocket of the inspected metal part.

Claim 15. (New) A method of packing parts in containers identifiable by a tool from which the parts were produced, wherein each of the parts are produced by one of a plurality of identifiable tools, wherein the method comprises the steps of:

providing a plurality of segregated streams of parts, each stream of parts being associated with the identifiable tool from which the parts were produced;

merging the segregated streams of parts into a single ordered stream of parts having a repeating sequential order enabling identification of the identifiable tool from which the parts were produced;

providing a plurality of containers each of which correspond to one of the plurality of identifiable tools; and

filling the parts from the ordered stream into the containers respectively corresponding to the identifiable tools.

Claim 16. (New) The method as claimed in claim 15, wherein the parts are drawn metal parts and the identifiable tools are identifiable drawing press tools.

Claim 17. (New) A system for producing and packing parts in containers, wherein the parts are identifiable by a tool from which they are produced, the system comprising:

means for providing a segregated stream of parts, each stream of parts being associated with the identifiable tool from which the parts were produced;

means for merging the segregated stream of parts into a single ordered stream of parts having a repeating sequential order enabling identification of the identifiable tool from which the parts were produced; and

means for filling the finished parts from the ordered stream into containers each of which corresponds to one of the plurality of identifiable tools.

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Claim 18. (New) The system according to claim 17, where the means for merging the segregated stream of parts into a single order stream of parts comprises:

a plurality of feed wheels arranged to receive the parts from respective ones of said segregated streams;

a merge wheel coupled to said feed wheels and arranged to receive drawn metal parts from each of the feed wheels in turn;

wherein said merge wheel is arranged to discharge drawn metal parts in an ordered stream having said repeating sequential order.

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